

## Claims

What is claimed is:

1. A wind instrument, comprising:

a head section having a proximal end, a distal end, a side surface and a bore extending therethrough;

a mouth opening formed in the side surface of the head section, the mouth opening communicating with the head section bore and having a circumferential diameter, wherein the ratio of the head section bore diameter in the vicinity of the mouth opening and the mouth opening circumferential diameter is about 1.5 to 1 or less;

a main section having a proximal end, a distal end and a bore extending therethrough, wherein the main section bore diameter at the proximal end of the main section is greater than the head section bore diameter at the distal end of the head section; and

an intermediate section having a proximal end, a distal end and a bore extending therethrough, the intermediate section bore having a first diameter at its proximal end substantially equal to the head section bore diameter at the distal end of the head section and a second diameter at its distal end substantially equal to the main section bore at the proximal end of the main section, whereby the proximal end of the intermediate section is coupled to the distal end of the head section and the distal end of the intermediate section is coupled to the proximal end of the main section, such that the head section bore, intermediate section bore and main section bore are coupled in flow communication.

2. The wind instrument of claim 1, wherein the intermediate section bore is conical.

3. The wind instrument of claim 1, wherein the head section bore and main section bore are cylindrical bores, each having a uniform diameter throughout its length.
4. The wind instrument of claim 3, wherein the head section bore, main section bore and intermediate section bore are concentrically aligned and centrally disposed within the wind instrument.
5. The wind instrument of claim 1, wherein the ratio of the head section cylindrical bore diameter in the vicinity of the mouth opening and the mouth opening circumferential diameter is about 1 to 1
6. The wind instrument of claim 1, wherein the head section and main section are tubular and the intermediate section is conical.
7. The wind instrument of claim 1, wherein the instrument is a flute and the main section bore is a cylindrical bore having a uniform diameter of about 19 mm.
8. A wind instrument, comprising:
  - a head section having a proximal end, a distal end, a side surface and a cylindrical bore extending therethrough and having a uniform diameter throughout its length;
  - a mouth opening formed in the side surface of the head section, the mouth opening communicating with the cylindrical bore and having a circumferential diameter, wherein the ratio of the head section cylindrical bore diameter and the circumferential diameter of the mouth opening is about 1.5 to 1 or less;
  - a main section having a proximal end, a distal end and a cylindrical bore extending therethrough and having a uniform diameter throughout its length, wherein the diameter of the main section cylindrical bore is greater than the diameter of the head section cylindrical bore; and

an intermediate section having a proximal end, a distal end and a bore extending therethrough, the intermediate section bore having a first diameter at its proximal end substantially equal to the diameter of the head section bore and a second diameter at its distal end substantially equal to the diameter of the main section bore, whereby the proximal end of the intermediate section is coupled to the distal end of the head section and the distal end of the intermediate section is coupled to the proximal end of the main section, such that the head section cylindrical bore, intermediate section bore and main section cylindrical are coupled in flow communication.

9. The wind instrument of claim 8, wherein the intermediate section bore is conical.
10. The wind instrument of claim 8, wherein the head section cylindrical bore, main section cylindrical bore and intermediate section bore are concentrically aligned and centrally disposed within the wind instrument.
11. The wind instrument of claim 8, wherein the ratio of the head section cylindrical bore diameter and the mouth opening circumferential diameter is about 1 to 1.
12. The wind instrument of claim 8, wherein the head section and main section are tubular and the intermediate section is conical.
13. The wind instrument of claim 8, wherein the uniform diameter of the main section bore is about 19 mm.